

# An Analysis of Forms and Functions of Extracurricular Physical Activity Check-in in Universities

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**Abstract:** By adopting the methods of literature review and logical analysis, this paper sorts out and analyzes the application forms and functional effects of extracurricular physical activity check-in in universities. The results show that extracurricular physical activity check-in in universities is mainly divided into two categories: sports APP check-in and themed sports check-in. Specifically, sports APP check-in realizes quantified exercise recording, supervision and feedback, and improves the physical education cultivation system; themed sports check-in functions to boost students' physical and mental health, cultivate sports interests, strengthen group social connection and construct campus sports culture. The two check-in modes complement each other functionally, effectively solving difficulties in students' persistent and diversified high-quality physical exercises, and providing solid support for the integration of in-class and after-class physical education on campus.

**Keywords:** university; extracurricular physical activity check-in; form; function

## 1. Introduction

According to the *Modern Chinese Dictionary (Single-color Illustrated Edition)*, the original definition of check-in refers to recording attendance via magnetic cards or fingerprint identification. With the popularization of the Internet, the connotation of check-in has been extended to various scenarios including study attendance, location registration and daily sign-in, forming a distinctive check-in culture<sup>[1]</sup>, among which physical activity check-in is defined as finishing prescribed sports tasks within a required period.

Currently, contemporary college students tend to adopt a sedentary indoor lifestyle, leading to continuous deterioration of physical fitness. Data from the 8th National Survey on Students' Physical Fitness and Health indicates that explosive power, muscle strength and endurance of college students aged 19 to 22 have declined further. Meanwhile, the *Report on China's Youth Sports Development (2015)* also confirms that college students generally have poorer physical fitness than middle school students. As a trackable and operable management mode, physical task check-in decomposes the macro goal of improving adolescents' physical health into feasible daily assignments, helping universities fulfill the physical education objectives of "systematic teaching, regular practice and frequent competitions" and reverse students' sedentary lifestyle. In-depth research on the forms and functions of extracurricular sports check-in is practically significant for optimizing the after-class physical education system and upgrading the quality of university physical education.

## 2. Theoretical Basis for the Adoption of Physical Activity Check-in

Driven by the development of "Internet + Sports", sports check-in has become a mainstream mode of university extracurricular sports, with its formulation grounded in sports pedagogic purposes from three dimensions:

### 2.1 Perspective of Behavioral Science Theory

Serving as a behavioral trigger, check-in forms a closed behavioral loop of "physical exercise → check-in → performance feedback" through fixed procedures such as uploading workout screenshots and filling in training logs, enabling students to develop stable long-term exercise habits via repeated

practice. Centered on bodily movements to complete sports assignments, check-in is highly consistent with the core goal of physical education: improving physical wellness and health status.

## **2.2 Essential Characteristics of Physical Education**

Physical sports feature practical bodily movements and operational participation. Sports check-in requires students to engage in independent training and sports practice to complete designated tasks, which matches the intrinsic attributes of physical activities.

## **2.3 University Sports Administration**

Supported by quantitative management, sports check-in resolves prominent administrative challenges of low participation rate, poor exercise persistence and difficult supervision over after-class sports through task setting, real-time recording and incentive feedback mechanisms. Besides, check-in data can be linked to PE credits, merit evaluation and physical fitness assessment standards, turning voluntary extracurricular exercise into compulsory assessed tasks and substantially motivating student participation.

## **3. Classifications of Extracurricular Physical Activity Check-in in Universities**

Relying on smart campus sports construction, sports check-in has been widely implemented with partial mandatory requirements in numerous prestigious universities including Peking University, Tsinghua University and Wuhan University, whose check-in results are incorporated into final physical education grades. Bao weiping proposed a management strategy applying sports APP to realize integrated in-class and after-class physical education management.<sup>[2]</sup> At present, sports check-in expands from classroom teaching to diversified after-school training with prominent personalized features. Based on individual participation modes and administrative implementation, it is categorized into sports APP check-in and themed sports check-in, jointly promoting the integration of curricular and extracurricular physical education.

### **3.1 Sports Application Check-in**

As a typical product of "Internet + Sports" applied in national fitness campaigns, sports APP check-in requires users to complete daily scheduled workout plans on dedicated mobile applications and enjoys extensive popularity among college students. Widely-used platforms among undergraduates include Keep, Codoon, Yuepaoquan, Ledongli and Sports Campus, which quantify and visualize workout data to effectively facilitate students' exercise willingness and habit formation.<sup>[3]</sup> Universities implement APP-based check-in via two approaches: establishing exclusive check-in systems through third-party platform cooperation, or designating specific mobile software for unified student use by schools, faculties or PE instructors.

Sports APP check-in can be divided into two methods: "Sports APP check-in" and "Sports APP+group check-in": ① Standalone sports APP check-in: Universities develop proprietary systems or cooperate with third-party developers to build data management platforms capable of automatic workout recording and academic grading. For instance, Sports Campus has been adopted by more than 400 domestic universities; Anhui Jianzhu University and South China University of Technology adopt Budaolepao; Sichuan University independently develops its Chuangao Sports APP; Tsinghua University launches a proprietary running application equipped with facial recognition to verify authentic training. ② Sports APP + group check-in: Instructors assign designated sports applications, and students submit workout screenshots to WeChat, QQ or DingTalk group chats after finishing tasks. Sanming University adopts Yiban platform for multi-item check-in including rope skipping, sit-ups and basketball free throws, where students upload training videos to course communities for check-in validation.

Abundant sports resources embedded in these applications satisfy diversified demands of teachers and students. For undergraduates, such check-in improves basic physical fitness and cultivates regular exercise habits; for university administrators and PE faculties, it realizes intelligent online management of after-class sports and improves administrative efficiency and precision.

### **3.2 Themed Sports Check-in**

Classified by activity venues, data recording methods and interactive carriers, themed sports check-in consists of offline and online forms with mutual integration and complementary advantages. Offline check-in constructs real-life sports communities via on-site interaction, while online check-in breaks geographical and temporal constraints for cross-campus communication, jointly enriching the content and forms of extracurricular sports check-in.

#### **3.2.1 Offline Themed Sports Check-in**

Characterized by fixed venues, on-site attendance and instant interaction, offline themed check-in mandates students to complete designated sports tasks at stipulated time and campus locations via physical registration and on-site certification, creating immersive collective sports atmosphere, which falls into four main types:

First, campus orienteering and stamp collection check-in: Sports challenges are set at landmark campus spots with themed assignments for stamp collection. Tianjin University of Technology and Education arranges cooperative drum games and shuttlecock kicking at cultural landmarks such as integrity education parks and ethnic unity corners; Henan University of Technology launches the "Dedication to the University of Technology, Youth Pursuit" campaign with an entire 4km running route and eight letter-shaped stamp stations.

Second, themed recreational sports check-in: Customized activities targeting specific groups or themes. The College of Veterinary Medicine of Sichuan Agricultural University holds offline dance check-in under the theme of "Caring for Pets", with fully-participated students earning cat food donation rewards; Yangzhou University organizes morning jogging check-in for postgraduates titled "Keep Moving Forward Along Postgraduate Journey".

Third, seasonal outdoor check-in: Outdoor hiking and walking activities combined with seasonal themes. Yancheng Teachers University initiates spring outdoor fitness check-in "Spring Steps, Dynamic Journeys", where participants obtain blind box prizes with mileage screenshots; many universities arrange mountain or suburban park hiking with fixed routes.

Fourth, sports event-based check-in: Students complete check-in by signing up and participating in organized competitions including intramural ball games, tug-of-war and campus mini-marathons, combining athletic competition, daily workout and social communication.

#### **3.2.2 Online Cloud-based Themed Sports Check-in**

Under online cloud check-in mode, students finish themed sports tasks at self-selected locations and submit certification materials including APP workout screenshots and quiz results via WeChat official accounts or mini-programs for teacher or system review. Serving as a vital supplement to offline activities, online check-in enables remote supervision and workout feedback for university sports management, with four mainstream categories:

First, creative route and video submission check-in: Participants design distinctive running or cycling tracks to form special graphics themed on cultural education. China University of Mining and Technology organizes National Day running activities requiring runners to draw patterns of "China" and "2025" via GPS tracks; Sichuan Agricultural University's "Route Creation" campaign encourages students to create red patterns such as five-pointed stars by tracing their running or cycling routes.

Second, mini-program and questionnaire-based data collection check-in: Henan University of Technology collects various workout records through the Xiaodaka mini-program; Wenzhou Medical University Renji College gathers daily planking and squat training data via Questionnaire Star platform.

Third, interdisciplinary sports-knowledge integrated check-in: Physical exercise is combined with professional curriculum learning. During campus orienteering at Wenzhou Medical University Binhai Campus, students must finish medical knowledge quizzes after running to complete valid check-in.

Fourth, sports skill demonstration check-in: Students record videos of ball games and traditional Chinese sports skills and submit online for instructors' professional evaluation and targeted guidance to upgrade athletic proficiency.

#### **4. Multifunctions of Extracurricular Sports Check-in in Universities**

##### **4.1 Functional Values of Sports APP Check-in**

###### **4.1.1 Quantitative Recording, Supervision and Feedback Function**

Equipped with positioning sensors and intelligent algorithms, sports applications automatically record workout duration, running distance, pace and calorie consumption, realizing visualized and traceable exercise management. PE teachers access real-time training data to monitor student workout frequency and task completion, while university sports departments aggregate statistics to revise PE grading standards and advance the integration of in-class and after-class physical education. From students' perspective, historical workout archives and customized training plans support autonomous fitness management; from institutional perspective, mandatory daily check-in effectively urges persistent physical exercise. Most applications generate personalized fitness reports based on historical data and provide scientific suggestions on workout intensity and frequency, realizing precision sports guidance driven by big data.

###### **4.1.2 Optimizing Holistic Physical Education Cultivation**

Core objectives of university physical education focus on developing students' sports competence, healthy lifestyles and sports morality. As an extension of classroom teaching, APP check-in links in-class theoretical learning with after-school practical training, shifting students' physical fitness improvement from passive requirement to active pursuit and fostering lifelong sports awareness. Integrated into final assessment, check-in data reforms the traditional one-off exam evaluation system into a hybrid assessment combining formative and summative evaluation. In addition, fitness popularization articles, ranking lists and built-in sports communities embedded in applications guide healthy living habits and cultivate sportsmanship including perseverance and teamwork.

##### **4.2 Functional Values of Themed Sports Check-in**

###### **4.2.1 Promoting Physical and Mental Wellbeing and Cultivating Sports Interests**

Tian Yupu pointed out that the function of sports and fitness is reflected in three aspects: promoting the formation of excellent qualities, improving "sub-health" status, and alleviating adverse psychological reactions.<sup>[4]</sup> On-site participation in themed check-in improves physical functions and alleviates negative emotions to realize holistic physical and mental development. Different from data-oriented APP running tasks, themed check-in prioritizes sports fun and inner motivation rather than numerical targets, helping students form a mindset that sports are an indispensable part of daily life. Diversified themed items such as traditional Chinese sports including shuttlecock, stilt walking and tug-of-war break the monotony of long-distance running, enrich exercise forms and popularize traditional sports culture.

###### **4.2.2 Facilitating Interpersonal Communication and Group Bonding**

Check-in represents a typical youth cultural practice to gain group identity.<sup>[5]</sup> The core significance is to encourage students to participate in physical exercise and establish good interpersonal relationships through clocking in.<sup>[6]</sup> Theme sports check-in is carried out through collective activities, combined with offline events, team challenges, and other forms, emphasizing scene based experiences and team collaboration, while cultivating team collaboration skills while exercising physical fitness. At the same time, it is organized by clubs and classes, with common interests as the link, and has social attributes. Participants form a social circle of "peer supervision mutual motivation" during the check-in process, such as the night running check-in challenge organized by the university running association and the campus mini marathon. Through offline gatherings and online sharing, a sports community is formed. This social connection not only reduces the difficulty of individual sports persistence, but also strengthens the reward mechanism of sports behavior through positive feedback from peers, which conforms to the closed-loop logic of "trigger behavior reward" where "collective participation" is the trigger point, "completing check-in" is the behavior, and "peer recognition" is the key reward. Theme sports check-in not only enhances physical and mental health, but also helps establish good interpersonal relationships, experience the joy of interpersonal communication, and promote spiritual pleasure.

###### **4.2.3 Constructing Campus Sports Culture**

Campus sports culture consists of spiritual, institutional and material dimensions which interact

mutually.<sup>[7]</sup> Gu Chunxian and other scholars proposed that the material, spiritual, institutional, and behavioral culture of campus sports should be regarded as primary indicators.<sup>[8]</sup> Featuring ritual opening ceremonies, achievement exhibitions and award ceremonies, themed check-in creates unique cultural symbols of campus sports and attracts students who rarely participate in competitive sports to join regular exercise, expanding the coverage of campus fitness activities.

With progressive institutionalization of sports check-in, universities carry out Fitness Week and Fitness Month activities based on themed check-in systems. Honorary titles such as Campus Sports Star are awarded to outstanding participants to set role models and enrich spiritual sports culture; meanwhile, supporting sports facilities, campus sports bulletin boards and broadcast programs consolidate the material foundation of campus sports, turning individual random exercise into prevailing campus lifestyle and forming an inclusive fitness ecosystem for all students.

#### 4.3 Complementary Synergy Between Two Check-in Modes

Instead of replacing one another, sports APP check-in and themed sports check-in complement and reinforce each other to tackle core obstacles of after-class university sports: standardized APP check-in guarantees daily regular training and solves the problem of insufficient exercise persistence; innovative themed check-in diversifies workout contents and improves training quality.

Their synergistic advantages manifest in multiple aspects: sports APP provides objective data support for themed activity design, while creative themed programs enrich APP workout scenarios; online community functions of applications expand offline activity influence, and lively offline sports atmosphere boosts APP user activity to construct an integrated online-offline sports network. The collaborative operation path is summarized as follows: universities analyze APP workout statistics to identify student exercise preferences for targeted themed activity design; abundant themed sports items supplement monotonous APP running tasks and motivate continuous student participation. Driven by "quantified data recording plus themed activity guidance", a three-tier extracurricular PE cultivation system covering daily regular training, personalized fitness upgrading and campus cultural immersion is established.

### 5. Conclusion

University extracurricular sports check-in is dominated by two mature forms: sports APP check-in and themed sports check-in, which fulfill quantified workout supervision and campus sports cultural construction and realize comprehensive sports functions of fitness improvement, character cultivation, entertainment and socialization. Remedying long-term supervision vacancies of after-class university sports and satisfying diversified personalized training demands, sports check-in turns into an effective carrier to cultivate autonomous exercise awareness among college students. Supported by complementary functions of the two check-in modes, the integration of curricular and extracurricular physical education is steadily promoted, contributing to improved university PE quality and all-round student development. Future universities shall further optimize check-in design by combining big-data analysis with innovative themed activities, perfect the long-term mechanism of lifelong sports cultivation and continuously upgrade the whole after-class physical education system.

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